

Abstract

Title: Swim Smooth System and Swimming Specialization

Objectives: Along with The Australian Swim Smooth Swim Type Coaching System criteria assign particular swim types to natural predispositions of selected elite swimmers and thus confirm suitability of their specialization.

Methods: This work was carried out as a methodological study that explores both the suitability of specialization in a selected group of elite swimmers and the potential benefits of the Swim Smooth Swim Type System compared to the more commonly used method of one swim type. The study involved measuring, displaying, monitoring, evaluation, analysis and correlation. We measured the stroke length and stroke rate. We observed individual style of freestyle technique. We evaluated the Swim Types, somatotype, personality traits of extroversion and swimmers' potential to either speed, middle distance or endurance performance. We performed analysis of the development of swimmers' personal records in their main discipline. We determined the degree of correlation among particular Swim Type criteria that determine Swim Smooth swim types. We evaluated the swimmers' specialization suitability and outlined way of their further development.

Results:

Swim Smooth Swim Type System revealed the inadequacy of specialization of one swimmer. For all the other swimmers the specialization adequacy was confirmed. Swim Type system also showed other appropriate ways of swimmers' further development. We stated, that from all research criteria, the greatest importance in determining Swim Type and in confirming the appropriateness of specialization, had stroke rate, stroke length and Ape Index. The speed and endurance test predispositions appeared to be important indicators as well. Somatotype appeared to be a significant indicator solely for one competitor, where the measured values were not aligned with the Swim Smooth standard. Personality trait extraversion appeared to be the least relevant.

Keywords: Competitive Swimming, Stroke Video-analysis, Front Crawl, Morphological and Psychological Predispositions, Swim Types